

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: CSMSL-0007-00(955) Henry
P.I. No.: 0007955
Jodeco Road Park and Ride Lot

OFFICE: Engineering Services

DATE: November 24, 2009

FROM: Ronald E. Wishon, Project Review Engineer *REW*

TO: Darryl D. VanMeter, PE, Innovative Program Delivery
Attn.: Marlo Clowers

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held October 5-9, 2009. Responses were received on November 20, 2009. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
A-3	Replace bus lane asphalt riding surface with concrete	\$51,660	No	The Design Team used one pavement type within the parking lot because it is more aesthetically pleasing than multiple pavement types. The savings calculated by the VE Team include life cycle cost savings. The initial installation would increase the cost by \$27,000.
B-6	Replace retention pond with open flat rip rap channel	\$343,479	No	The stakeholders involved in the Park and Ride program developed non-standard guidelines due to the unique features of park and ride lot construction. Because of a concern regarding storm water management, the stakeholders committed to a policy of providing storm water detention facilities within the park and ride lots. Replacement of the detention pond with an open flat channel would violate the storm water detention commitment.

B-7	Redesign parking lot and utilize Holloway Road	(-\$50,000) Cost increase	No	This would require additional acquisition of ROW which would delay the project.
C-3	Use exterior/perimeter ditch in lieu of a portion of curb and gutter	\$25,373	No	There are several underground utilities – 3 telephone and 2 water lines – that would be impacted by the construction of an open ditch. Redesign and relocation of the utilities could delay the project. Additionally, trash and sediment are main sources of concern for a park and ride lot. Open ditches would collect debris from the parking lot, requiring maintenance for the removal of the debris.
D-4/E-1	Combine fare and bus shelters into one continuous shelter	\$80,000	No	Specific needs are addressed by each type of shelter. All park and rides do not require both types of shelters. Using standardized designs throughout the park and ride system minimizes the cost of the design and provides consistent, easily recognizable branding for the stakeholders. Combining the standard structures into a non-standard structure would create an increased cost for a new design of the combined building, delay the project letting, and be inconsistent with the branding concept.
F-4	Use 24" curb and gutter instead of 30"	\$39,752	Yes	This will be done. The entrance to the park and ride facility is located along Patrick Henry Parkway. Patrick Henry Parkway is a Henry County Road and the County requires 24" curb and gutter.
I-2	Verify traffic control costs	\$47,674	Yes	This will be done.

M-1	Replace concrete flume with Type III Rip Rap	\$11,000	No	The concrete flume indicated in the VE recommendation is an existing feature and not part of the proposed project. Additionally, this existing flume has been classified as a non-buffered non-jurisdictional water of the state and thus cannot be disturbed by this project.
Q-1	Replace some of the concrete islands with striped islands	\$26,098	No	The curbed islands enhance the safety of commuters by providing an area for pedestrian refuge. The raised islands also serve to channelize motorists and discourage them from driving across areas designated for parking.

Additional information was provided on November 24, 2009.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:



Gerald M. Ross, PE, Chief Engineer

Date:

11/24/09

REW/LLM

Attachments

c: Ben Buchan
Mike Dover/Marlo Clowers
Lamar Pruitt
Ken Werho
Lisa Myers
Matt Sanders

VE Team: Carlos Baker
Brandon Kirby
Phillip Magoon
Robert Reid
Dexter Whaley
Michelle Wright

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA



INTERDEPARTMENT CORRESPONDENCE

FILE CSMSL-0007-00(955), Henry County
Jodeco Road Park and Ride Lot - GRTA
P.I. No.: 0007955

OFFICE Innovative Program Delivery

DATE November 19, 2009

FROM  Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

TO Ronald E. Wishon, Project Review Engineer

SUBJECT Value Engineering Study – Response to Final Report

The final report for the Value Engineering Study conducted October 5 - 9, 2009 for the above listed project has been reviewed by this Office, Georgia Regional Transportation Authority and consultant URS. Comments on each of the nine value engineering recommendations are included in the attached report.

The office of Innovative Program Delivery is in agreement with the suggested actions listed in the attached report for the above listed project. If you have any questions or require additional information, please contact Marlo Clowers at (404) 631-1713 or email.

DVM:MLC

cc: Ben Buchan
Lamar Pruitt
Ken Werho
Carlos Baker
Brandon Kirby
Philip Magoon
Robert Reid
Dexter Whaley
Michelle Wright
Shaun Green, GRTA
Patrick Gallagher, URS

Value Engineering Study Report Responses

CSMSL-0007-00(955), P.I. No. 0007955, Henry County
Jodeco Road Park and Ride Lot – GRTA

November 13, 2009

Idea No. A-3: Concrete bus lane only

Original Concept: The bus lane within the Park and Ride lot has a typical section of 8" GAB, 3" 25 mm asphalt, 2" 19 mm asphalt, and 1.25" 9.5 mm asphalt.

Proposed Change: Replace bus lane asphalt riding surface with concrete. Utilize a typical section of 8" GAB, 2" 19 mm asphalt, and 4 ¼" PCCP. Increase structural support, provide visual contrast, extend the period between maintenance cycles thus reducing disruption to P&R service, more aesthetically pleasing.

Design Team Discussion: Construction of the internal bus lane with a contrasting pavement would aid in delineating the bus travel way, thus encouraging separation of bus and commuter vehicle traffic. Using a PC Concrete Pavement could extend the period between maintenance cycles.

The Asphaltic Cement Pavement was designed for a 20-year design life with the bus loading taken into consideration; therefore the asphalt section is structurally adequate.

Aesthetics are objective. The design team believes using one pavement type within the parking lot is more aesthetically pleasing than using multiple pavement types.

The Initial cost of PC Concrete Pavement is significantly higher than the Initial cost of Asphaltic Cement Pavement. The VE team estimated this recommendation would increase the Initial cost by \$27,000.

Conclusion: The original concept will be carried forward into final design.

Idea No. B-6: Replace pond with open flat channel

Original Concept: Drain Park and Ride lot to retention pond.

Proposed Change: Replace pond with open flat channel and eliminate concrete flume. This option would be less costly, decrease construction time while maintaining compliance with regulations, and requiring less ROW.

Design Team Discussion: The stakeholders in the Park and Ride program recognized at the onset of the program that the development of parking lots is somewhat different

than typical GDOT roadway projects. Some non-standard guidelines had to be developed for the GRTA Park and Ride lots. The stakeholders acknowledged a concern regarding storm water management and committed to a policy of providing storm water detention facilities on the Park and Ride lot projects. More specifically, a policy was adopted to restrict post-development flow from the sites to pre-development rates.

Replacement of the detention pond with an open flat channel would violate the storm water detention commitment.

Conclusion: The original concept will be carried forward into final design.

Idea No. B-7: Redesign parking lot and utilize Holloway Road

Original Concept: Construct parking spaces north and south of Park and Ride entrance.

Proposed Change: Construct all parking spaces to the south of the P&R entrance. Provide right out only exit to Patrick Henry Parkway. The 3 lots north of the P&R entrance require 3.6 acres of property. The 4.2 acres of undeveloped property located between the P&R entrance and Holloway Rd may be acquired to construct more parking spaces. This relocation will help to avoid the bedrock outcropping discovered north of the entrance. It will also help to reduce the quantity of borrow. The easternmost lot would be designed to encourage parking for the vanpool ridership relocated when the P&R lot is constructed. Finally any additional acreage may be utilized to increase parking capacity.

Design Team Discussion: The stakeholders in the Park and Ride program recognized at the onset of the program that the development of parking lots is somewhat different than typical GDOT roadway projects. Some non-standard guidelines had to be developed for the GRTA Park and Ride program. The stakeholders acknowledged acquisition of parcels from agreeable property owners is strongly preferred over condemnation proceedings. This is due to 1) the value of time, Park and Ride lots are typically complete and in operation within two years of the start of the Concept Report, 2) the value of public perception of the bus service program, and 3) the limited funding for Park and Ride lots, the typical lot is well under \$10 million with one half or more of the cost being right of way. Working with the impacted property owners to select lower value property and leave viable remainder parcels is crucial to keeping the right of way costs down and the development time short.

The VE team estimated this recommendation would increase the Initial cost by \$50,000 and significantly delay the schedule.

Conclusion: The original concept will be carried forward into final design.

Idea No. C-3: Exterior/ perimeter ditch in lieu of a portion of Curb & Gutter

Original Concept: Curb & Gutter around Park and Ride lot.

Proposed Change: Replace a portion of C&G in SE quadrant with an open channel Ditch. Channels water away from P&R lot, reduces number of drainage structures, quantity of pipe, less maintenance of C&G

Design Team Discussion: Construction of an open channel ditch around the southeast quadrant of the park and ride lot would reduce the total amount of curb and gutter, as well as the total number of drainage structures and the total length of storm drain pipe. Additionally it would reduce a proportion of the maintenance required for curb and gutter equal to that of the amount of curb and gutter removed. However, construction of open channel ditches inherently involves cutting into and below the existing grade.

There are three (3) existing underground telephone lines and two (2) water lines within the existing Holloway Road Right-of-Way corridor. The design team understands these utilities to be shallow, but the typical installation depth for water lines in Georgia is approximately three feet (3') to the top of pipe and underground telephone conduits are usually installed between three and four feet (3'~4") below grade. Additionally underground telephone conduits are frequently encased in concrete. At the southeastern end of the Holloway Road ROW corridor, the open channel ditch would be approximately four to five feet (4'~5') below existing grade. In either the case of a typical installation depth or a more shallow installation depth, an open channel ditch would require the relocation of these utilities. This will increase project cost and delay the start of construction while the utility companies design the alternate routes. The telephone lines serve the active cellular tower site and could not be removed from service at any time. Furthermore an open channel ditch constructed to the north of the Holloway Road ROW corridor will require a relocation of the project's proposed water utility connections (construction delay for redesign by Henry County Water & Sewer) and the swale may require a grading and drainage easement from the Cellular Tower owner.

In addition to storm water runoff, open channel ditches collect everything else that is washed into them. From a park and ride lot, trash and sediment are the main sources of concern. As a result, the cost of open channel ditches should included removing accumulated debris from the open channel ditches as well as the need to mow the grass. Any savings recognized by a reduction in the maintenance of curb and gutter

would be offset by the cost of maintaining the open channel ditch.

Per Georgia law, water flow within open channels requires the use of channel protection against erosive velocities. While it may be possible to design an open channel ditch for low velocity rates at low flows, the higher flow rates generated by larger rain events may require the installation of rip rap protection over a combined length of approximately one-thousand feet (1000'), thus further increasing the cost of the alternative.

Conclusion: The original concept will be carried forward into final design.

Idea No. D-4/E-1: Combine Fare and Bus Shelters

Original Concept: The park and Ride lot would have a separate Fare shelter and (3) individual Bus shelters

Proposed Change: Combine the fare shelter with (2) Bus shelters into one continuous shelter. This would provide a larger functional sheltered area for bus riders.

Design Team Discussion: The stakeholders in the Park and Ride program have specific needs addressed by the two types of shelters. The Fare Systems shelter provides a structure to house equipment and provide space for future ticket vending machines. The Bus shelters give visual clues to the customers regarding where they should stand to meet their bus and the shelters also house the ITS infrastructure. The design of these two independent structures has been standardized so that they can be used as needed on the various Park and Ride lot projects. In general not all Park and Ride lots get both structures. Using standardized structures means that the stakeholders incurred one design cost at the beginning of the Park and Ride project and they have consistent, easily recognizable branding for their product. Combining the standard separate structures into a non-standard combined structure would necessitate an increased cost for a new design of the combined building, delay the project letting, and be inconsistent with the branding concept.

Conclusion: The original concept will be carried forward into final design.

Idea No. F-4: Use 24" curb and gutter instead of 30"

Original Concept: Use 30" curb and gutter (C&G) on entrance drive into the park and ride lot and 24" on the interior parking lot.

Proposed Change: Use 24" curb and gutter on the entire site. The cost estimate shows a higher unit cost for 24" C&G than for 30" C&G. It is believed that this difference is due to GDOT not utilizing significant quantities of 24" c and g. The VE team assumes

that there will be an approximate 10% reduction in material cost of C&G under 30" c and g. Use \$14 unit cost in lieu of 17.86 per LF.

Design Team Discussion: Patrick Henry Parkway is a Henry County Road and the County requires 24" curb and gutter. The driveway and deceleration lane were designed to Georgia DOT standards. Georgia DOT is in the process of revising the standards and details to include 24" curb & gutter.

Conclusion: This proposed change will be made in the final design.

Idea No. I-1: Verify traffic control costs

Original Concept: Traffic control on park and ride lot.

Proposed Change: Verify traffic control costs. The lot will be constructed on new location. Minor traffic control for the addition of a right turn lane and bus slip ramp.

Design Team Discussion: Traffic control costs will be verified.

Conclusion: This proposed change will be made in the final design.

Idea No. M-1: Replace concrete flume with type III rip rap

Original Concept: Install concrete flume with class B concrete near retention pond.

Proposed Change: Construct ditch and line with rip rap. This change will provide better erosion control, more environmental sensibility, enhanced aesthetics, increased velocity dissipation and seepage into the ground.

Design Team Discussion: The concrete flume indicated in the VE report currently exists and was not a part of the proposed design. More importantly this existing concrete flume has been classified as a non-buffered non-jurisdictional water of the state and thus cannot be disturbed by this project.

Making the assumption that the VE Team meant to replace the proposed concrete flume indicated on the plans in the grassed area between the I-75 on-ramp and the proposed bus lane, the Design Team reviewed it accordingly.

Stormwater sheet flows from the bus lane and the on-ramp into the proposed drainage swale in the grassed area between the two paved areas. Calculated flow velocities of this stormwater runoff exceed ten feet per second (10 fps) in some locations. Per the *Manual for Erosion and Sediment Control in Georgia* as published by the Georgia Soil and Water Conservation Commission, the mandated erosion control best management

practice for velocities of or in excess of 10 fps is the use of concrete. Additionally aesthetics are objective. The design team believes using a concrete flume within a grassed area is more aesthetically pleasing than using rip rap that may shift downstream in heavy rains and will not protect the adjacent soil and grass from erosive velocities as effectively.

Conclusion: Given the existing concrete flume's status as a water of the state, the proposed change cannot be made. If the VE Team intended to discuss the proposed flume adjacent to the on-ramp, the original concept will be carried forward into final design.

Idea No. Q-1: Replace some of the concrete islands with striped islands

Original Concept: All islands in the parking lot are raised concrete islands

Proposed Change: Reduce the c & g and concrete sidewalk needed on project by replacing some of the concrete islands with striped islands. This also provides a clearly defined row and visible barrier with less man hours and material.

Design Team Discussion: Studies of potential bus riders indicate that in order for them to consider using commuter bus service the coaches and facilities have to be upscale, safe and secure. The GRTA Xpress facilities were developed with this in mind. The curbed islands provide for the safety of the commuters by providing an area for pedestrian refuge behind a physical barrier and for the protection of parked vehicles from moving vehicles behind a physical barrier. The raised islands also serve to direct moving vehicles toward and channelize them in drive lanes and discourage them from crossing parking areas.

Conclusion: The original concept will be carried forward into final design.

PRECONSTRUCTION STATUS REPORT FOR PI:0007955

JODECO RD HENRY COUNTY PARK & RIDE LOT - GRTA

MGMT LET DATE : 05/21/2010
 MGMT ROW DATE : 05/22/2009
 BASELINE LET DATE: 03/30/2010
 SCHED LET DATE : 6/22/2010
 WHO LETS?: GDOT Let
 LET WITH :

PRIORITY CODE: PTIP
 DOT DIST: 3
 CONG. DIST: 3
 BIKE: N
 MEASURE: E
 NEEDS SCORE: 6
 BRIDGE SUFF:

MPO: Atlanta TMA
 TIP #: AR-613
 MODEL YR : 2020
 TYPE WORK: Park & Ride Lot
 CONCEPT: PARK & RIDE LOT
 PROG TYPE: New Construction
 Prov. for ITS: N
 BOND PROJ : GRTA BUS

PROJ ID: 0007955
 COUNTY: Henry
 LENGTH (MI): 0.00
 PROJ NO.: CSMSL-0007-00(955)
 PROJ MGR: Clowers, Marlo
 AOHD Initials: MD
 OFFICE : Innovative Prog. Delivery
 CONSULTANT: Local Design, Reimbursed by GDOT funds
 SPONSOR : Georgia Regional Transportation Authority
 DESIGN FIRM: URS Corporation

PROGRAMMED FUNDS

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
ROW	2010	2010	3,460,500.00	41559	AUTHORIZED	7/13/2009
UTL	NONE	2010	104,064.00	CRD-3	PRECAST	
CST	2010	2010	1,919,136.00	CRD-3	PRECAST	
CST	NONE	2010	1,220,000.00	GSFIC	PRECAST	

STIP AMOUNTS

Activity	Cost	Fund
ROW	2,000,000.00	41559
UTL	0.00	CRD-3
CST	3,200,000.00	CRD-3
CST	0.00	GSFIC

District Comments

The P&R lot has 1072 spaces and is located in northeast of the I-75/Jodeco Road interchange. This project can be constructed independent of interchange project 312160- and eliminates the need for project 363860-. CST will be reimbursed with a Federal Transit Administration grant through GRTA [MLC 10/09].

ROW funds approved 7-13-09 but not notified until 9-8-09 [TB]

Bridge: NO BRIDGE REQUIRED
 Design: Updating plans from PFPR (10/09).
 EIS: CE/APvd3-25-09/OnSchedCST/Myrthil(11-5-09)
 LGPA: NOT APPLICABLE
 Programming: This project was split from PI# 0003543; PE done under 0003541
 ROW: 10-23-09 need appraisal p.6 sfp. proj. assigned 3-23-09 sfp
 Traffic Op: PFPR sent 9/23/09K W/NR
 Utility: Will need to resnd 2nd sub 10/09
 EMG: PARK & RIDE LOT

Prel. Parcel CT:	8	Total Parcel in ROW System:	8	Cond. Filed:	0	Acquired by:	DOT	DEEDS CT:	0
Under Review:	1	Options - Pending:	1	Relocations:	0	Acquisition MGR:	Phillips, Sherry		
Released:	7	Condemnations- Pend:	0	Acquired:	0	R/W Cert Date:			